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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/004,504	10/26/2001	Yi-Ren Woo	1416.03US01	4675

27367 7590 03/19/2007
WESTMAN CHAMPLIN & KELLY, P.A.
SUITE 1400
900 SECOND AVENUE SOUTH
MINNEAPOLIS, MN 55402-3319

EXAMINER

SWEET, THOMAS

ART UNIT	PAPER NUMBER
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3738

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/19/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/004,504

Applicant(s)

WOO ET AL.

Examiner

Thomas J. Sweet

Art Unit

3738

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 December 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19, 22 and 40-56 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19, 22, 40-56 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Applicant's arguments filed 12/22/2006 have been fully considered but they are not persuasive. The scope of a Markush group is uncertain or ambiguous with the use of "comprising".

Applicant's arguments with respect to claim 1-19 and 40-55 have been considered but are moot in view of the new ground(s) of rejection.

Response to Amendment

The declaration filed on 12/12/2003 under 37 CFR 1.131 has been considered but is ineffective to overcome the MacGregor (US 4936317) in view of Carlyle et al (WO 01/41825) references. Applicant has amended the claims several times since the declaration and the claims now include carbonaceous solid, which was not antedated by the declaration.

Allowable Subject Matter

The indicated allowability of claims 22-23 is withdrawn since the claims have been amended to include carbonaceous solid. A new rejection on the prior references appears below.

Claim Objections

Claims 1-19, 22-23, 40-55 are objected to because of the following informalities: Independent claims 1, 40 and 49, are in improper Markush form, since the word "comprising" is used in a list of alternatives. The Examiner suggests using the Markush form of "selected from the group consisting of" A, B, C "and" D. Appropriate correction is required. It is improper to use the term "comprising" instead of "consisting of" Ex parte Dotter, 12 USPQ 382 (Bd. App. 1931).

Claim 56 has no antecedent basis to a base claim since it is dependent on canceled claim 20.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-19, 22 and 40-56 are rejected under 35 U.S.C. 103(a) as being unpatentable over MacGregor (US 4936317) in view of Carlyle et al (WO 01/41825). MacGregor discloses a heart valve (col 3-6) including a rigid carbonaceous solid occluder with a porous surface. However, MacGregor does not disclose a filler consisting of mixtures of hydrogel, structural protein and bioactive agents. Carlyle et al discloses a coating for heart valves occluders consisting of mixtures of hydrogel, structural protein and bioactive agents for the purpose of causing cell adhesion to the surface. It would have been obvious to one of ordinary skill in the art at the time the invention was made to coat the occluder of MacGregor with the coating material of Carlyle et al (thereby filling the pores of the occluder) in order to promote cell adhesion to the surface.

With regard to claims 3, 4, 42, 43 and 52, the surface in figures of Carlyle et al appears smooth and page 3 states that it is suitable for contact with the patients bodily fluids.

With regard to claim 5, see page 12, 2nd paragraph of Carlyle et al.

With regard to claims 6 and 7, see page 7, 2nd paragraph of Carlyle et al.

With regard to claims 8, 44 and 53, see page 22, 2nd paragraph of Carlyle et al.

With regard to claims 9-14, 45-47 and 54-55, see page 7, 2nd paragraph of Carlyle et al.

With regard to claims 15 and 48, both of Carlyle et al and MacGregor mention the use of anticoagulants. However, the filler as disclosed does not include anticoagulant. It is well known in the art of hydrogels to include anticoagulants therein to prevent clotting. It would have been obvious to one of ordinary skill in the art at the time the invention was made to include anticoagulant in the hydrogel of Carlyle in order to prevent clotting.

With regard to claim 16-17 and 51, MacGregor discloses network of interconnected interstitial pores below the surface.

With regard to claim 18, collagen is a nutrient of Carlyle et al.

With regard to claim 19, see page 25, 2nd paragraph of Carlyle et al.

With regard to claim 56, this is a non-elected member of a Markush grouping.

Claims 1, 40 and 49 were rejected on carbonaceous solid.

Conclusion

Application/Control Number: 10/004,504

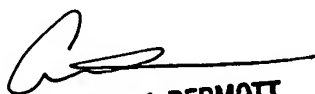
The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Nikolchev et al. (US 2002/0020417), Callister et al. (US 6,432,116 and US 6,096,052) and Gory et al. (US 5,649,906).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas J. Sweet whose telephone number is 571-272-4761. The examiner can normally be reached on 5:45am - 4:15pm, Tu-Th.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Corrine M. McDermott can be reached on 571-272-4754. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

tjs


CORRINE McDERMOTT
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3700